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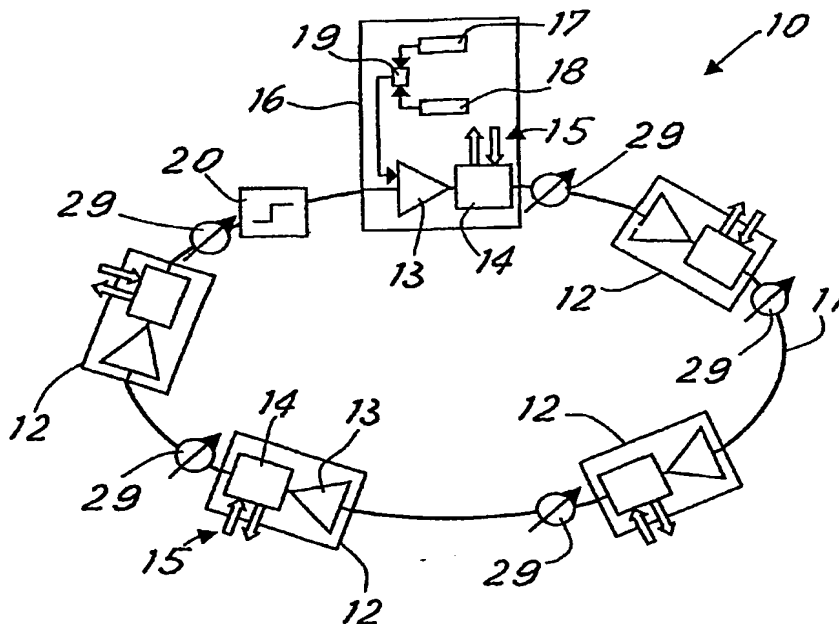
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(54) Title: **LOOPED OPTICAL NETWORK WITH ASE LIGHT RECIRCULATION AND LINK AND NETWORK SURVIVABILITY CONTROL SYSTEM**



(57) Abstract: A looped WDM optical network comprises an optical loop with optical amplifiers (12, 16) between the sections of the loop (11) and with ASE recirculation in the loop. At a point of the loop a laser beam is injected and allowed to circulate in the loop with the laser beam being centered around a  $\lambda_{\text{LINK}}$  wavelength where it is desired that a lasing peak be generated. This supplies high network strength in terms of section loss variations and greatly improves the OSNR of the WDM signal. High network survivability is also achievable.



WO 2005/025096 A1



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